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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,436	11/14/2003	Shlomo Assa	06155-081002	9373

26161 7590 06/25/2004

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EXAMINER	
PHAM, HAI CHI	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,436	ASSA ET AL.	
	Examiner	Art Unit	
	Hai C Pham	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/14/03, 12/8/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The following claims are objected to because of the following informalities:

Claim 2:

- Line 1, "printing" should read --printing the code according to--.

Claim 3:

- Line 1, "printing the corrected" should read --printing the code according to the corrected data set--.

Claim 5:

- Line 3, "*a* product" should read --*the* product-- since it refers back to a previously defined limitation.

Claim 6:

- Line 3, "*a* product" should read --*the* product--;
- Line 7, "*a* product" should read --*the* product--.

Claim 9:

- Line 3, "were" should read --was--.

Claim 11:

- Line 1, "printing" should read --printing the code according to--.

Claim 12:

- Line 1, "printing the corrected" should read --printing the code according to the corrected data set--.

Claim 14:

- Line 3, "*a* product" should read --*the* product--.

Claim 19:

- Line 2, "*a* product" should read --*the* product--.

Claim 25:

- Line 3, "*a* product" should read --*the* product--.

Claim 26:

- Line 3, "*a* product" should read --*the* product--;
- Line 7, "*a* product" should read --*the* product--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. The following claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10:

- The following limitation "electronics for printing the code" at line 8 appears to be ambiguous in that it is not known how to differentiate the "electronics" from the "laser" (line 2), which has been defined as a means for printing the code. However, it will be assumed that either a laser driver driving the laser source or

an optical scanning system is being claimed for performing the printing of the code until the Applicants say otherwise.

Claim 11:

- The method claim 11 improperly claims dependency from claim 10, which is an apparatus claim.

Claim 12:

- The method claim 12 improperly claims dependency from the apparatus claim 10.

Claim 15:

- The following limitation "a laser configured to produce a printing beam for printing the code on a product" at lines 2-3 appears to be a repetitive limitation, since the laser has already been claimed in the corresponding base claim 10.

Claim 19:

- The limitation "*the* order" at line 5 lacks antecedent basis.

Claim 20:

- The limitation "*the* area" at line 1 lacks antecedent basis;
- The limitation "*the* laser" at line 2 lacks antecedent basis.

Claim 27:

- The limitation "*the* order" at line 5 lacks antecedent basis.

Claim 28:

- The limitation "*the* area" at line 1 lacks antecedent basis.

Claim 34:

- The limitation "*the* density" at line 5 lacks antecedent basis.

Claim 35:

- The limitation "*the* amount of time" at line 2 lacks antecedent basis.

Claim 36:

- The following limitation "electronics for printing pixels" at line 5 appears to be ambiguous in that it is not known how to differentiate the "electronics" from the "laser" (line 2), which has been defined as a means for printing the code. However, it will be assumed that either a laser driver driving the laser source or an optical scanning system is being claimed for performing the printing of the code until the Applicants say otherwise.

Claims 13, 14, 16-18, 21-26, 29-32 are dependent from claims 10, 19, 20, 27 above, and are therefore indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-33 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasebe et al. (U.S. 5,734,412).

Hasebe et al. discloses a scan type laser marking device and a method for printing, the device comprising a laser (1) for printing an alphanumeric code (mark M being a character or a graphic form) on a product (workpiece W or object 181) moving

in a direction (direction B), the code being constructed from a plurality of pixels (the graphic form or mark having a plurality of dots) (col. 2, lines 43-57), and electronics (drive power source circuit 2 along with the optical system driving device 5 driving the galvanometer mirrors 3a, 3b) for printing the pixels on the product in a two dimensional trace (by two-dimensionally scanning the laser beam, Fig. 10) so as to form the code on the product. Hasebe et al. further teaches the method for printing including generating a corrected data set (X and Y position correcting data) (col. 10, line 66 to col. 11, line 13) indicating the position that each pixel would occupy if each pixel was moved at the velocity of the product until the pixel is printed, and printing the code according to the corrected [coordinate] data set.

With regard to claims 2, 3, 5, 7-9, 11, 12, 14, 16-18, 23, 25, 31, Hasebe et al. also teaches printing the code according to the corrected [coordinate] data set including printing a two-dimensional trace or pixels or spots (Fig. 10), the laser being mounted in a housing (180, Fig. 7), which includes an optics assembly (condenser lens 4) to focus a printing beam produced by the laser onto the product positioned adjacent the housing, the first data set (original coordinate data) indicating the positions of the spots, and the corrected data set indicating the positions that each spot would occupy if each spot was moved along with the product until the spot was printed (Figs. 3A-3D, 10) (col. 11, lines 54-61).

With regard to claims 4, 13, 19, 22, 24, 30, 32, Hasebe et al. teaches prioritizing the order in which the pixels are printed such that the pixels are printed in a direction, which is opposite to the direction which the product moves (Fig. 4A), the pixels being

arranged in a plurality of columns and prioritizing the order which the pixels are printed including prioritizing each of the columns (Figs. 4B, 4C).

With regard to claims 6, 15, 20, 26, 28, Hasebe et al. further teaches the housing including a printing beam exit member through which the printing beam exits the housing, and an aperture limiting the area (target area) within which the laser is able to print and the product moves past the aperture (beam outlet directed towards the object) (col. 10, lines 3-6).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasebe et al. in view of Spratte et al. (U.S. 5,175,425).

Hasebe et al. discloses all the basic limitations of the claimed invention including the dot pitch (in other words, the density of the dots) being dependent on the time the workpiece passes through the exposure station (col. 11, lines 40-53) but except for the density of the pixels being changed to construct the code.

However, Spratte et al. discloses a process for marking semiconductor surfaces with a bar code that allows a high character density with a very small character height with reliability by controlling the laser output and the scanning speed.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Hasebe et al. with the aforementioned teaching of Spratte et al. for the purpose of providing a high resolution code on the surface of the object to be marked.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai Chi Pham

HAI PHAM
PRIMARY EXAMINER
June 23, 2004